FACT SHEET

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NEPA Call-In

"Designed to meet the NEPA compliance needs of GSA's realty professionals"

Wetlands Protection

The Issue

Several laws, Executive Orders (EO), and regulations have been enacted or established to protect wetlands which the General Services Administration (GSA) must follow in its National Environmental Policy Act (NEPA) compliance efforts. This fact sheet provides an overview of those requirements as they pertain to GSA, describes common features and types of wetlands, and details the important role wetlands play in ecosystems.

What's Inside . . .

Wetlands Protection

Executive Order 11990

In 1977, President Jimmy Carter issued EO 11990, entitled "Protection of Wetlands." This EO applies to GSA's leases, lease/construction projects, and acquisitions. EO 11990 instructs each Federal agency to avoid new construction in wetlands unless the agency finds there is no practicable alternative to construction in the wetland, and the proposed construction incorporates all possible measures to limit harm to the wetland. Agencies should use economic and environmental data, agency mission statements, and any other pertinent information when deciding whether or not to build in wetlands. EO 11990 recognizes the importance of public participation by directing each agency to have an early public review of plans for new construction in wetlands.

The Clean Water Act

The Clean Water Act (CWA) sets the basic structure for regulating discharges of pollutants to U.S. waters. Section 404 of the CWA establishes a Federal program to regulate the discharge of dredged and fill material into waters of the U.S., including wetlands. Responsibility for this program is shared by the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE). USACE oversees the day-to-day administration of the program and issues permits for construction in wetlands. EPA is responsible for the overall implementation of the program and developing guidelines for reviewing permits. EPA also actively reviews Section 404 permit applications. The United States Fish and Wildlife Service (USFWS) also has important advisory responsibilities under Section 404.

Compliance with Section 404 guidelines must be explicitly demonstrated before USACE will issue a permit. GSA's permit application must show it has:

- taken steps to avoid wetland impacts where practicable;
- minimized potential impacts to wetlands; and
- compensated for those impacts which were unavoidable through restoration or creation of new wetlands.

Wetland permit applications are rigorously examined by USACE, EPA, USFWS and the public. The EPA Administrator also has the authority to veto a permit issued by USACE in cases where EPA believes there would be an unacceptable adverse impact on municipal water supplies, shellfish beds and fisheries, wildlife and/or recreational areas. State and local governments often have additional laws and regulations that must be followed. In fact, permit applicants must obtain state water quality certifications before a Section 404 permit can be issued.

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) states there is a national interest in the effective management, beneficial use, protection, and development of the coastal zone. It further declares it is national policy to preserve, protect and develop, and where possible to restore or enhance the resources of the Nation's coastal zone. Public access to coastal zones is protected under the Act. "Coastal zone" includes the coastal waters and the adjacent shore lands "strongly influenced by each other and in proximity to the shorelines of the

several coastal states, and includes islands, transitional and intertidal areas, salt marshes, wetlands, and beaches." This includes coastal waters and shore lands of the Great Lakes.

Under the Act, when a GSA development project affects any land or water use or natural resource of a coastal zone, GSA must ensure the project is, to the maximum extent practicable, consistent with the state's coastal zone management program. This includes activities in areas outside coastal zones but directly or indirectly affecting adjacent or downstream coastal management zones. To this end, GSA must provide to the relevant State agency a determination which examines the action's consistency with the State's coastal zone management program. The CZMA encourages states to exercise their full authority over the lands and waters in the coastal zone, and provides grants to help states develop and implement management programs to achieve wise use of the land and water resources of the coastal zone.

Wetlands Defined

Wetlands are the link between water and land. They are areas that are covered by water or that have waterlogged soils for significant periods during the growing season (the growing season is the average period between the last killing frost in the spring and the first killing frost in the fall). Plants growing in wetlands are capable of living in soils lacking oxygen for at least part of the growing season. Wetlands such as swamps and marshes are often obvious, but some wetlands are not easily recognized because they are dry during part of the year.

Types of wetlands include, but are not limited to, bottom land forests, swamps, pine savannahs, sloughs, mud flats, bogs, marshes, wet meadows, potholes and wet tundra. The major wetland systems are marshes, swamps and bogs. **Marshes** are characterized by soft-stemmed plants (e.g., cattails) which grow both in and out of the water. **Swamps** additionally contain woody plants, and some are forested with hardwood trees such as red maple, gums and ashes. Some swamps, however, are forested with cedars, spruces, firs and other evergreens. **Bogs** are found mainly in deep glacial lake beds and are usually covered with moss. Other types of wetlands in North America include **pocosins** - shrub bogs which occur on low flatlands along or near the coast and are characterized by broad, shallow stream basins; **vernal pools** - seasonal wetlands; **riparian** or "stream side" wetlands; and **estuarine** or salt water wetlands.

Wetlands Ecology

Wetlands serve as buffers, protecting the shoreline from erosion caused by waves. Wetlands also moderate storm surges from hurricanes and tropical storms. Wetlands act as natural water storage areas during floods and storms, reducing potentially damaging effects by holding high waters and then releasing them slowly as water levels drop. Wetland plants often bond soil to their roots, thereby increasing sediment durability.

Wetlands, especially seasonally flooded freshwater wetlands, often serve as groundwater recharge areas where rain and surface water filter into underlying aquifers. These aquifers are often sources of municipal drinking water. Wetlands also filter and remove pollutants (e.g. chemicals, pesticides and heavy metals) from water by incorporating them into sediments or through plant uptake, which neutralizes and breaks them down biologically, finally releasing the naturally processed elements into the environment. By removing nitrogen and phosphorus, wetlands help prevent the over-enrichment of water.

Wetlands provide feeding, nesting and wintering areas for migrating waterfowl and provide fish with spawning, feeding, cover and nursery habitat. The USFWS estimates that up to 43% of threatened and endangered species rely directly or indirectly on wetlands for their survival.

Wetlands are key to the commercial fishing industry. Estuarine wetlands provide nursery areas for the vast array of saltwater wetland dependent fish, shellfish, and crustaceans. Ecologists warn the loss of current saltwater wetlands is affecting the reproduction of large fish populations.

Wetland Designation

Some areas have already been surveyed and designated as wetlands. To determine if an area has been designated as a wetland, contact the local USACE District Office. If the area has not been evaluated for wetlands designation, GSA should select a wetlands coordinator to assist the USACE, FWS, and/or contractor in wetlands delineation. The determination of whether an area is a CWA Section 404 wetland should be conducted in accordance with the *USACE 1987 Wetlands Delineation Manual.* Because a State may have more stringent delineation guidelines, applicable State guidelines should also be con-

sidered. The person(s) performing the wetlands delineation should provide the following information:

- Wetland delineation maps showing the size, location, configuration, boundaries, sample plot locations, local land marks for orientation, names of water features, north arrow, scale, date, and person(s) conducting the delineation;
- Wetland delineation forms, or similar data sheets, for each sample site which clearly list the indicators for the soil, vegetation, and hydrology used to determine the wetland;
- An overall vicinity map of the area which identifies the locations of the various study areas within the report; and
- A narrative report identifying wetlands found and including the above information.

Wetland determinations must consider three parameters: vegetation, soils, and hydrology. The *USACE 1987 Wetlands Delineation Manual* contains both general information on hydrophytic vegetation, hydric soils, and wetland hydrology, and positive wetland indicators of each parameter. Certain wetland types, under the extremes of normal circumstances, may not always meet all the wetland criteria.

Wetlands Recognition

Wetlands are areas where the frequent and prolonged presence of water at or near the soil surface drives the natural system—the kinds of soils that form, the plants that grow, and the fish and/or wildlife communities that use the habitat. The area has a strong chance of being a wetland if:

- it is in a floodplain or otherwise has low spots in which water stands for more than seven consecutive days during the growing season. *Caution: Most wetlands lack both standing water and waterlogged soils during at least part of the growing season;*
- it has plant communities that commonly occur in areas having standing water for part of the growing season (e.g., cypress-gum swamps, cordgrass marshes, cattail marshes, bulrush marshes, tule marshes and sphagnum bogs);
- it has soils that are called peats or mucks; or
- it is periodically flooded by tides.

While some wetlands can be easily identified by the above situations, it may be more difficult to identify other wetlands. Scientists trained in wetland recognition must carefully examine the area for indicators of the three major characteristics of wetlands: vegetation, soil and hydrology. One half of the United States has non-typical wetlands that may exhibit highly modified wetlands plants, soil, and hydrology.

Loss of Wetlands in the U.S.

In the United States today, over half of the original wetlands have been destroyed. Where once there were over 200 million acres of wetlands in the lower 48 states, today there are only 100 million acres. The majority of wetland losses are due to man's activities rather than to natural causes such as erosion or sedimentation. Twenty two states have lost at least 50% of their original wetlands. Seven of those 22 states—California, Illinois, Indiana, Iowa, Missouri, Kentucky, and Ohio—have lost at least 80% of their original wetlands.

Vegetation Indicators of Wetlands

Almost 5,000 different plant species can occur in wetlands. However, the presence of wetland vegetation can usually be determined by knowing only a few species. For example, cattails, bulrushes, cordgrass, sphagnum moss, bald cypress, willows, mangroves, sedges, rushes, arrowheads and water plantains usually occur in wetlands. Other indicators of the presence of wetland plants are trees with shallow root systems, swollen trunks (e.g., bald cypress or tupelo gum) or roots growing from the plant trunk above the soil surface.

A listing of wetland plants that occur in a specific area can be obtained from:

- U.S. Army Corps of Engineers (local office);
- U.S. Army Engineer Waterways Experiment Station (WES), Attn: CEWES-EL, 3909 Halls Ferry Road, Vicksburg, MS 39180-6199; and
- U.S. Fish and Wildlife Service, National Ecology Research, 9720 Executive Center Drive, Suite 101, Monroe Bldg., St. Petersburg, FL 33702.

Federal Laws and Regulations on Wetlands Applicable to GSA

National Environmental Policy Act (NEPA) of 1969
NEPA requires the Federal government to consider every significant impact a proposed action may have on the environment, including wetlands. Section 201 also requires the President each year to send to Congress an Environmental Quality Report containing the status and condition of the major natural, manmade, or altered environment, including wetlands.

Executive Order 11990
Executive Order 11990, "Protection of Wetlands," directs all Federal agencies to avoid destruction or modification of wetlands whenever there is a practicable alternative. EO 11990 instructs each Federal agency to avoid undertaking or aiding new construction in wetlands unless the head of the agency finds there is no practicable alternative to construction in the wetland and the proposed construction incorporates all possible measures to limit harm to the wetland.

Clean Water Act
Section 404 of the Clean Water Act (CWA) established the Federal program that regulates activities in the nation's wetlands. Specifically, Section 404 of the CWA established a program to regulate discharge of dredged and fill material into waters of the U.S., including wetlands. Responsibility for the program is shared by EPA and the U.S. Army Corps of Engineers (USACE).

Coastal Zone Management Act
The Coastal Zone Management Act declares it is national policy to preserve, protect and develop, and where possible, to restore or enhance, the resources of the Nation's coastal zone. The Act provides grants to help states develop and implement management programs to achieve wise use of the land and water resources of the coastal zone. The Act states programs should provide for the protection of natural resources including wetlands.

40 CFR 1.49, "Office of Water"
Responsible for management of EPA's water programs. The Office of Wetlands Protection, under the Office of Water, administers the 404/Wetlands Program and develops policies, procedures, regulations, and strategies addressing the maintenance, enhancement, and protection of wetlands.

40 CFR 6.108, "Criteria for initiating an EIS"
Requires an Environmental Impact Statement (EIS) be prepared and issued if the proposed action may have significant adverse effects on wetlands, including indirect and cumulative effects, or if any major part of a structure or facility constructed or operated under the proposed action may be located in wetlands.

40 CFR 230.41 "Wetlands"
Prohibits the discharge of dredged or fill material in wetlands, since such material is likely to damage or destroy habitat and adversely affect the biological productivity of wetlands ecosystems.

40 CFR 232, "404 Program Definitions; Exempt Activities Not Requiring 404 Permits
Contains definitions applicable to the CWA Section 404 program for discharges of dredged or fill material. These definitions apply to both the Federally operated program and State administered programs. This part also describes those activities which are exempted from regulation.

40 CFR 257.9 and 40 CFR 258.12, "Wetlands"
States new landfills, or lateral expansions of existing landfills shall not be located in wetlands, unless the owner or operator can make certain demonstrations to the Director of an approved State.

Soil Indicators of Wetlands

Approximately 2,000 named soils occur in wetlands. These soils are called hydric soils and are developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods of the growing season. The U.S. Natural Resource Conservation Service (NRCS) has published a list of hydric soils. This list is available from the local NRCS office or from WES. If the soil in an area is listed as hydric, the area may be a wetland.

If the soil name in an area is not known, evidence of hydric soil might include:

- Soil made up of mostly decomposed plant material (peats or mucks);
- Soil with a thick layer (8 inches or more) of decomposing plant material on the surface;
- Soil with a bluish gray, gray or dark dull color 10 to 12 inches below the surface. This type soil is called gleyed soil (gray color);
- Soil that smells like rotten eggs;
- Soil that is sandy and has a layer of three or more inches of decomposing plant matter on the surface; and
- Soil that is sandy and has dark stains or streaks of organic matter in the upper layer 3 to 12 inches below the soil surface.

Hydrology Indicators of Wetlands

Wetland hydrology refers to the presence of water either above or within the soil for a sufficient period of the year to significantly influence the plant types and soils in the area. The most reliable evidence of wetland hydrology is provided by a gauging station or groundwater well data. However, the availability of such information is limited for most areas and, when it is available, requires analysis by trained experts. The following indicators provide evidence of the periodic presence of soil saturation or flooding:

- Standing or flowing water observed for seven or more consecutive days during the growing season;
- Waterlogged soil, meaning the soil glistens with water at any depth to 12 inches; water can be squeezed from the soil; or a 12 inch deep hole contains standing water;
- Water marks on trees or other erect objects, indicating that water periodically covers the area to the depth shown;
- Drift lines or small piles of debris oriented in the direction of water movement;
- Debris lodged in trees or piled against other objects; and
- Thin layers of sediment deposited on leaves or other objects.

For More Information

GSA is committed to complying with all laws and regulations pertaining to preserving and protecting the Nation's wetland resources. While GSA tries to avoid wetlands impacts, it is sometimes unavoidable. In these rare cases, GSA works closely with EPA, USACE, USFWS, state and local authorities, and the public to fully comply with all Federal regulations to minimize adverse impacts on the wetlands. For more information on wetlands preservation, contact NEPA CALL-IN at 202-208-6228.

References

40 CFR 1.49, "Office of Water."

40 CFR 6.108, "Criteria for Initiating an EIS."

40 CFR 230.41 "Wetlands."

40 CFR 232, "404 Program Definitions: Exempt Activities not Requiring 404 Permits."

40 CFR 257.9 and 40 CFR 258.12, "Wetlands."

1987 U.S. Army Corps of Engineers, Wetlands Delineation Manual.

Clean Water Act.

Coastal Zone Management Act of 1972.

EPA Wetlands Fact Sheets, EPA843-F-95-001, February 1995.

Executive Order 11990.

National Environmental Policy Act of 1969.

Statement of Work for Conducting a Wetlands and Vernal Pools Survey and Report for Mather Air Force Base, California, MAB 90-7004, 23 March 1990.

Statement of Work, United States Air Force, Wetlands Inventory, Delineation, and Mapping at Selected Bases, (undated).

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